AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A vertical cavity surface emitting laser (VCSEL) comprising:

a first mirror;

an active area situated on said first mirror;

a dielectric gain guide situated on said active area, wherein the dielectric gain is deposited on the active area according to a pattern in order to form an aperture in the dielectric gain guide; and

a second mirror situated on said dielectric gain guide.

2. (Original) The VCSEL of claim 1,further comprising:

a substrate; and

wherein said first mirror is situated on said substrate; and

said substrate comprises InP.

3. (Original) The VCSEL of claim 2, wherein said dielectric gain guide is for current confinement.

4. (Currently Amended) The VCSEL of claim 3, wherein said dielectric gain guide comprises a material selected from a group of SiO_2, TiO_2, and SiN~~, and the like~~.

5. (Original) The VCSEL of claim 1, further comprising:

a substrate; and

wherein:

said mirror is situated on said substrate; and

said substrate comprises GaAs.

6. (Original) The VCSEL of claim 5, wherein said dielectric gain guide is for current confinement.

7. (Currently Amended) The VCSEL of claim 6, wherein said dielectric gain guide comprises a material selected from a group of $Si0_2$, $Ti0_2$, and SiN~~, and the like~~.

8. (Currently Amended) A method for making a gain guide for a VCSEL comprising:

forming a first mirror on a substrate;

forming an active region on said first mirror;

forming a dielectric gain guide on said active region;

masking the dielectric gain guide with a mask in order to pattern the dielectric gain guide for an aperture;

forming an aperture in the dielectric gain guide according to the mask; and

forming a second mirror on said dielectric gain guide.

9. (Currently Amended) The method of claim 8, wherein the dielectric gain guide comprises a material selected from a group of SiO_2, TiO_2, and SiN and wherein masking the dielectric gain guide further comprises one of:

forming the aperture using a lift off technique; or

etching the aperture. ~~, and the like~~.

10. (Original) The method of claim 9, wherein the first and second mirrors are distributed Bragg reflectors.

11. (Original) The method of claim 10, wherein the first mirror is at least nearly lattice matched to the substrate.

12. (Original) The method of claim 11, wherein the substrate comprises InP.

13. (Original) The method of claim 11, wherein the substrate comprises GaAs.

14. (Currently Amended) A ~~means~~ vertical cavity surface emitting laser for providing laser light comprising:

first reflecting means, situated on a substrate, for reflecting light;

active means, situated on said first reflecting means, for converting current to light;

confinement means, situated on said active means, for confining current, wherein the confinement means is patterned with a mask in order to form an aperture therein; and

second reflecting means, situated on said confinement means, for reflecting light. ~~; and~~

~~wherein said confinement means comprises a dielectric.~~

15. (Currently Amended) The ~~means~~ vertical cavity surface emitting laser of claim 14, wherein said first means for reflecting comprises first distributed Bragg reflector layers including one or more materials that are ~~a material that is~~ at least nearly lattice matched with the substrate and wherein said second reflecting means comprises second distributed Bragg reflector layers.

16. (Currently Amended) The ~~means~~ vertical cavity surface emitting laser of claim 15, wherein said active means is at least nearly lattice matched with said first means for reflecting.

17. (Currently Amended) The ~~means~~ vertical cavity surface emitting laser of claim 16, wherein the substrate comprises InP and the dielectric comprises at least one of SiO_2, TiO_2, or SiN.

18. (Currently Amended) The ~~means~~ vertical cavity surface emitting laser of claim 16, wherein the substrate comprises GaAs and the dielectric comprises at least one of SiO_2, TiO_2, or SiN.

19. (Currently Amended) A laser source comprising:

a first reflector;

a cavity situated on said first reflector;

a layer of dielectric, having an opening formed therein, the layer of dielectric formed using a dielectric deposition process, the layer of dielectric situated on said cavity;

a second reflector situated on said layer, wherein the first reflector, the cavity and the second reflector are formed using an eptiaxial growth process.

20. (Original) The source of claim 19, wherein said first reflector is situated on a substrate.

21. (Original) The source of claim 20, wherein said first reflector is at least nearly lattice matched with the substrate.

22. (Original) The source of claim 21, wherein the laser source has an InP based structure.

23. (Original) The source of claim 21, wherein the laser source has a GaAs based structure.

24. (Currently Amended) The source of claim 21, wherein said layer comprises at least one material selected from of a group of SiO_2, TiO_2, and SiN~~, and the like~~.